

REMARKS

Claims 1 and 22 are amended. Claims 1-28 and 30-61 are pending in the application.

Claims 22-28 and 30 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner indicates that the recited limitation of "first end" and "second end" lack proper antecedent basis. Without admission as to the propriety of the Examiner's statements, independent claim 22 is amended to recite "a first end" and "a second end". Accordingly, applicant respectfully requests withdrawal of the § 112 rejection of claim 22 and its dependent claims 23-38 and 30 in the Examiner's next action.

Claim 1 is amended to correct a typographical error.

Claims 1-28 and 30-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over various cited combinations of Jones, U.S. Patent No. 5,254,210; Abe, U.S. Patent No. 5,200,388; and McMillan, U.S. Patent No. 5,316,579. The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Claims 1-28 and 30-61 are allowable over the various cited combinations of Jones, Abe and McMillan for at least the reason that the references, individually or as combined, fail to disclose or suggest each and every limitation in any of those claims.

Referring initially to independent claims 1, 14, 22 and 45, each of these claims

recites a manifold assembly comprising a body having a plenum chamber. Each of these claims additionally recites one or more precursor inlet to the plenum chamber and a purge gas inlet into the plenum chamber received upstream of the plenum chamber precursor inlet(s). The Examiner indicates reliance on Jones as showing a body comprising a plenum chamber. The Examiner further indicates that the body disclosed by Jones is an "injection header where all four three-way valves 81 feed to". However, applicant notes that such "injection header" is not described or in any way defined by the Jones disclosure. Nor does the Jones disclosure in any way indicate, suggest or define a "plenum chamber" as indicated by the Examiner. The Examiner indicates that a plenum chamber is an inherency of any piping conduit and indicates reliance upon applicant's Fig. 1. Applicant requests reconsideration.

First, applicant notes that reliance upon applicant's disclosure as a supporting basis of a 103 rejection is improper. Second, the Examiner has not demonstrated or in any way shown support that the relied upon reference describes or indicates a plenum chamber such that one of ordinary skill in the art would consider such to be disclosed by the Jones reference. In this regard the Examiner is encouraged to review the recent Board of Patent Appeals and Interferences decision (Appeal Number 03-0877, regarding Patent Application Serial Number 09/601,844) where the Appeal Board found examiner error where the Examiner failed to provide evidence that a channel disclosed in a reference could be defined to include a plenum chamber. The Examiner's present reliance upon Jones as showing a plenum chamber is similarly unsupported and rejection based upon such contention is accordingly unfounded.

The Examiner further indicates at, for example, pages 3-4 of the present Action that

applicant's recited limitations of "precursor inlet", "precursor gas", "purge gas", and "purge gas inlet" specify intended use and thus do not limit the scope of a claim. The Examiner indicates reliance upon the Walter decision (*in re Water*, 618 F.2d at 769, 205 USPQ at 409, in MPEP § 2106). The Examiner further indicates reliance upon MPEP § 2111.02 and the cases recited therein to support the contention that intended use must result in structural differences between the claimed invention and the prior art, indicating that if the prior art structure is capable of performing the intended use than it meets the claim. Applicant requests reconsideration.

Dependent claims 1, 14, 22 and 45 clearly recite precursor inlets to a plenum chamber and purge gas inlets into the plenum chamber as limitations within the body of the claims. These are very clearly structural limitations. The Walter case relied upon by the Examiner pertains to treating 35 U.S.C. § 112, sixth paragraph, and determination of equivalence for means-plus-function claims. Since claims 1, 14, 22 and 45 are not means-plus-function claims, analysis under the Walter decision is inappropriate. With respect to MPEP § 2111.02 and the cases cited therein, such set forth reasoning and standards for use during interpretation and analysis of a claim preamble not structural limitations with the body of the claim. Accordingly, the Examiner's reading out of structural distinction between purge gas inlets and process chemical inlets is unfounded and rejection upon such grounds is improper.

The Examiner similarly indicates that applicant's recited limitations of a first valve being the only valve associated with a precursor inlet and the limitation of a plenum chamber being vertical when connected to a substrate processing chamber are intended uses. The Examiner additionally indicates that these limitations are not considered to limit

the scope of the claims and relying again upon Walter, MPEP § 2106, MPEP § 2111.02 and the cases cited therein. As indicated above, applications of these MPEP sections and case holdings are relied upon in error. Accordingly, the applicant's recited limitations of vertically aligned plenum chamber and a first valve being the only valve associated with a precursor inlet cannot be read out of the claims.

The Examiner further indicates at page 4 of the present Action that Jones is relied upon as showing a gas flow inlet which provides a venturi effect within a plenum chamber relative to all other gas flow inlets. The Examiner states that such finding is based upon a structure shown in the reference which is substantially identical to that of the claims. However as discussed above, the Examiner does not provide any support for finding Jones to disclose a structure which is "substantially identical" to any of the claims. Accordingly, the Examiner's contention that a venturi effect is inherent in the Jones device (which the Examiner indicates is a precursor header, also unsupported by the Jones disclosure) is unfounded.

For at least these reasons Jones fails to disclose or suggest the claims 1, 14, 22 and 45 recited manifold having a plenum chamber with precursor inlets into the plenum chamber and a purge gas inlet received upstream of the plenum chamber precursor inlets.

The Examiner indicates at page 6 of the present action that Abe is relied upon as teaching a purge stream and a purge inlet into a plenum chamber where the purge inlet is at 90 degrees relative to a precursor inlet. However, at page 8 of the present Action, the Examiner indicates that Abe is not relied upon as teaching a plenum chamber. From the Examiner's statements, it is unclear as to how Abe can be relied upon as showing "a purge inlet to a plenum chamber" without teaching a plenum chamber. Further, Abe does not

disclose or suggest utilization of a purge or a purge inlet. Accordingly, Abe cannot suggest or contribute toward suggesting a purge inlet to a plenum chamber. Since neither Abe nor Jones disclose or suggest the claim 1, 14, 22 and 45 recited body comprising a plenum chamber or the recited purge gas inlet to the plenum chamber, the combination thereof cannot suggest the recited purge gas inlet to the plenum chamber being received upstream of the plenum chamber precursor inlet.

As indicated at page 7 of the present Action, McMillan is relied upon as showing a structure on a body for connecting with a substrate processing chamber. However the structure connection disclosed by McMillan does not contribute toward suggesting the claims 1, 14, 22 and 45 recited purge gas inlet to a plenum chamber received upstream of a plenum chamber precursor inlet. Accordingly, claims 1, 14, 22 and 45 are not rendered obvious by the cited combinations of Abe, Jones and McMillan and are allowable over these references.

Dependent claims 2-13, 15-21, 23-28 and 46-61 are allowable over the various cited combinations of Jones, Abe and McMillan for at least the reason that they depend from corresponding allowable base claims 1, 14, 22 and 45.

Each of independent claims 31 and 39 recite a purge gas inlet into a plenum chamber which is upstream of plenum chamber precursor inlets. Accordingly, claims 31 and 39 are allowable over Jones, Abe and McMillan for at least reasons similar to those discussed above with respect to claims 1, 14, 24 and 45. Each of claims 31 and 39 additionally recite a plenum chamber outlet at an end of the plenum chamber opposing the purge gas inlet where the body has a structure configured to mount the second end of the plenum chamber to a substrate processing chamber. As indicated at page 7 of the present

Action, McMillan is relied upon as showing a structure on a body enabling an outlet to connect with a substrate processing chamber inlet.

Referring to McMillan at Fig. 5 and the accompanying text which the Examiner indicates as being relied upon as basis for the present rejection, applicant notes that McMillan does not disclose or suggest a purge gas or purge gas inlet to a plenum chamber. Further, it is unclear as to how the manifold structure disclosed by McMillan teaches or suggests the structure on the manifold body configured to mount the body to a substrate processing chamber inlet as recited in claim 31 or claim 39. Accordingly, McMillan cannot fairly be relied upon as teaching or suggesting the claim 31 and claim 39 recited structure on a manifold body configured to mount to a substrate processing chamber with the plenum chamber outlet proximate to and connected with the substrate processing chamber inlet and where the plenum chamber outlet opposes a purge gas inlet to the plenum chamber.

Neither Abe nor Jones contributes toward suggesting the claim 31 and 39 recited structure on a manifold body configured to mount the plenum chamber outlet with a substrate processing chamber where the plenum chamber outlet opposes a purge gas inlet to the plenum chamber. Accordingly, independent claims 31 and 39 are not rendered obvious by the cited combinations of Jones, Abe and McMillan and are allowable over these references.

Dependent claims 32-38 and 40-44 are allowable over Jones, Abe and McMillan, individually or as combined, for at least the reason that they depend from allowable base claims 31 and 39.

For the reasons discussed above, claims 1-28 and 30-61 are allowable. Accordingly, applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

Respectfully submitted,

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By: Jennifer J. Taylor
Jennifer J. Taylor, Ph.D.
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